REMARKS

The Office Action dated February 24, 2005 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-29 are currently pending in the application. However, claims 16-29 have been withdrawn from consideration pursuant to a restriction requirement. Claims 13-15 have been allowed. Therefore, claims 1-12 are respectfully submitted for consideration.

Claims 1-3 and 8-11 were rejected under 35 U.S.C. 102(b) as being anticipated by Onishi (U.S. Patent No. 5,434,863). The rejection is respectfully traversed for the reasons which follow.

Claim 1, upon which claims 2-12 are dependent, recites a network switch for network communications. The network switch includes at least one first data port interface, the at least one first data port interface supporting a plurality of first data ports transmitting and receiving data at a first data rate. The network switch further includes at least one second data port interface, the at least one second data port interface supporting a plurality of second data ports transmitting and receiving data at a second data rate. The network switch also includes a flow control unit, wherein at least one of the first data ports and at least one of the second data ports are linked together with a plurality of ports on a second network switch forming a trunk group with a larger load capacity than either of said at least one of the first data ports and the at least one of the second data ports, the

trunk group being configured by the flow control unit to statistically distribute a data load transmitted across the trunk group.

The present invention is concerned, in part, with trunking in a network switch. Trunking involves logically treating several links or connections between two devices as a single link. One embodiment of the present invention is illustrated in Fig. 20 where multiple ports are tied together so that a logical link would have a greater capacity than any one port on the network switch.

As will be discussed below, Onishi fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages discussed above.

Onishi discloses an internetworking apparatus for connecting plural network systems and a communication network system composed of plural network systems mutually connected. More specifically, Onishi discloses that a router manager and a plurality of routing accelerator modules for performing routing are connected to one another through a high speed bus, and a plurality of communication ports are connected to the respective routing accelerators. The plurality of routing accelerators can perform the routing for the reception of a data packet at high speed.

Applicants respectfully assert that Onishi fails to disclose or suggest that "at least one of said first data ports and at least one of said second data ports are linked together with a plurality of ports on a second network switch forming a trunk group with a larger load capacity than either of said at least one of said first data ports and said at least one of said second data ports, said trunk group being configured by the flow control unit to

statistically distribute a data load transmitted across said trunk group," as recited in present claim 1. A trunk group, according to the claimed invention, is where multiple ports are combined to form a single logical port with a larger load capacity. For example, if traffic between a first switch and a second switch is anticipated as being high, the LAN may be configured such that a plurality of ports, for instance ports 1 and 2, can be connected together. In a 100 megabits per second environment, the trunking of two ports effectively provides an increased bandwidth of 200 megabits per second between the two ports (Specification, page 40, lines 9-16).

The Office Action took the position that the bus disclosed in Onishi is equivalent to the trunk group recited in the pending claims. Applicants respectfully assert, however, that a bus does not correspond to a trunk group. A bus, generally, is a transmission path upon which signals are dropped off or picked up at every device attached to the line. More specifically, a bus in Onishi is referred to as a connection means with a fixed throughput of, for example, 200 M bytes/second (Onishi, Column 7, lines 1-3). Additionally, Onishi discloses that a second connection means is provided in the low hierarchy of the routing accelerators (Onishi, Column 7, lines 16-20). Again, this second connection means has a fixed throughput of 33 M bytes/second (Onishi, Column 7, line 20).

As such, Onishi only discloses that ports 53 and 54 may both be connected to the bus 4. Onishi, however, does not disclose or suggest that two or more ports on a first network switch are linked together with a plurality of ports on a second network switch

thereby forming a trunk group with a larger load capacity. According to Onishi, the bus has a fixed throughput and therefore the load capacity is not increased in any manner. Therefore, Onishi cannot disclose forming a trunk group with a larger load capacity. For at least the reasons discussed above, Applicants respectfully submit that Onishi fails to disclose or suggest all of the elements of claim 1.

Additionally, Onishi does not render the claims of the present application obvious. Onishi does not disclose or suggest the use of trunk groups and thus one of skill in the art would not have been motivated to modify Onishi to yield the claimed invention.

Given the deficiencies of Onishi discussed above, applicants respectfully submit that the rejection of claim 1 as being anticipated by Onishi is improper for failing to disclose all of the elements of claim 1. Further, applicants respectfully submit that claims 2-12, which are dependent upon claim 1, should also be allowed for at least their dependence upon claim 1 and for the specific limitations recited therein.

Claims 1-4 and 6-12 were rejected under 35 U.S.C. 102(e) as being anticipated by Haddock (U.S. Patent No. 6,104,700). The rejection is respectfully traversed for the following reasons.

Applicants respectfully submit that Haddock also fails to disclose or suggest the elements of the claims, and therefore fails to provide the advantages discussed above. Haddock discloses a policy based quality of service. Particularly, Haddock discloses a method for managing bandwidth allocation in a network that employs a non-deterministic access protocol, such as an Ethernet network. A packet forwarding device receives

information indicative of a set of traffic groups, if the QoS policy is based upon individual station applications; or a physical port if the QoS policy is based purely upon topology. After receiving a packet associated with one of the traffic groups on a first port, the packet forwarding device schedules the packet for transmission from a second port based upon bandwidth parameters corresponding to the traffic group with which the packet is associated.

Applicants respectfully assert that Haddock also fails to disclose or suggest that "at least one of said first data ports and at least one of said second data ports are linked together with a plurality of ports on a second network switch forming a trunk group with a larger load capacity than either of said at least one of said first data ports and said at least one of said second data ports, said trunk group being configured by the flow control unit to statistically distribute a data load transmitted across said trunk group," as recited in present claim 1.

The Official Action asserted that the switch matrix disclosed in Haddock corresponds to the trunk group recited in the present invention. The switch matrix is a device that connects each channel to a central memory such as packet random access memory (Haddock, Column 4, lines 30-32). On the other hand, a trunk group is formed when multiple ports are combined to form a single logical port with a larger load capacity. Haddock, like Onishi, does not disclose or suggest that two or more ports on a first network switch are linked together with a plurality of ports on a second network switch thereby forming a trunk group with a larger load capacity. Haddock makes no

mention of trunking two or more ports in order to form a trunk group with a larger load capacity than the capacity of the individual ports.

The Office Action alleges that Haddock discloses an octal fast Ethernet interface and a gigabit Ethernet interface and also alleges that the switch matrix couples these two interfaces. Referring to the specific passages cited in the Office Action, Haddock discloses that "according to one embodiment, each channel is capable of supporting a data transfer rate of one gigabit per second in the transmit direction and one gigabit per second in the receive direction, thereby providing 2 Gb/s full-duplex capability per channel. Additionally, the channels may be configured to support one Gigabit Ethernet network connection **or** eight Fast Ethernet network connections." Therefore, it would appear that Haddock does not disclose supporting both an octal fast Ethernet interface and a gigabit Ethernet interface at the same time. Furthermore, Haddock does not disclose or suggest linking these channels to form a trunk group with a larger load capacity than the individual connections. Rather, Haddock only discloses that each channel may be connected to a central memory such as packet RAM via the switch matrix. Haddock makes no mention of combining the channels to form a trunk group. Consequently, Haddock does not disclose linking ports together to form a trunk group with a larger load capacity, and therefore this element of claim 1 is not disclosed or suggested by Haddock.

In addition, Haddock does not render the claims of the present application obvious. Haddock does not disclose or suggest the use of trunk groups and thus one of

skill in the art would not have been motivated to modify Haddock to yield the claimed invention.

Applicants respectfully assert that the rejection of claim 1 is improper as Haddock fails to teach all of the elements of claim 1. Furthermore, applicants respectfully submit that claims 2-12, which depend upon claim 1, should be allowed for at least their dependence upon claim 1 and for the specific limitations recited therein.

Claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi. The rejection is respectfully traversed for the reasons which follow.

The Office Action acknowledged that Onishi does not teach the placement of the first data port interface, second data port interface, CPU interface and communication channel on a single chip. The Office Action then took the position that "a person of ordinary skill in the art would have been motivated to integrate these components onto a single chip by the constant desire for smaller integrated electronic devices." However, as stated above, Onishi does not disclose or suggest the use of a trunk group as recited in claim 1. Therefore, it would not have been obvious to one of skill in the art to integrate the components onto a single chip that included the trunk group element. Additionally, applicants submit that claim 5 is dependent upon claim 1 and therefore should be allowable for at least its dependence upon claim 1 and for the specific limitations recited therein.

Claim 5 was also rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock. The Office Action acknowledged that Haddock does not teach the placement

of the first data port interface, second data port interface, CPU interface and communication channel on a single chip. The Office Action then took the position that "a person of ordinary skill in the art would have been motivated to integrate these components onto a single chip by the constant desire for smaller integrated electronic devices." However, as discussed above, Haddock fails to disclose or suggest the use of a trunk group as recited in claim 1. Therefore, it would not have been obvious to one of skill in the art to integrate the components onto a single chip that included the trunk group element. Moreover, applicants submit that claim 5 is dependent upon claim 1 and therefore should be allowable for at least its dependence upon claim 1.

Thus, applicants respectfully submit that the rejections of claim 5 are improper as the cited references fail to disclose or suggest all of the elements of claim 5.

Applicants respectfully submit that Onishi and Haddock fail to disclose or suggest critical and important elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-15 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Majid S. AlBassam
Registration No. 54,749.

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

MSA:jf